

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

541121
PCT/FR2004/000014



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| Applicant's or agent's file reference CC4 2003001 PCT | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
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| International Patent Classification (IPC) or national classification and IPC D21H 13/40 | | |
| Applicant SAINT-GOBAIN VETROTEX FRANCE S.A | | |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

3. This report is also accompanied by ANNEXES, comprising:

a. ☐ (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:

☐ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).

☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.

b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

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|---|---|
| Date of submission of the demand 24 mars 2004 (24.03.2004) | Date of completion of this report 02 March 2005 (02.03.2005) |
| Name and mailing address of the IPEA/EP | Authorized officer |
| Facsimile No. | Telephone No. |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FR2004/000014

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language _____, which is language of a translation furnished for the purpose of:

- ☐ international search (under Rules 12.3 and 23.1(b))
- ☐ publication of the international application (under Rule 12.4)
- ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):

☐ The international application as originally filed/furnished

☒ the description:

pages _____ 1-10 _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

pages _____ 1-20 _____, as originally filed/furnished

pages* _____, as amended (together with any statement) under Article 19

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the drawings:

pages _____ 1 _____, as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (specify): _____
- ☐ any table(s) related to sequence listing (specify): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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International application No.

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Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Claims 1-20

Claims

YES

NO

Inventive step (IS)

Claims 1-20

Claims

YES

NO

Industrial applicability (IA)

Claims 1-20

Claims

YES

NO

2. Citations and explanations (Rule 70.7)

The present notification makes reference to the following documents:

D1: WO 01/11138 A (OWENS CORNING FIBERGLASS CORP; DONG DAOJIE (US)) 15 February 2001 (2001-02-15)

D2: WO 99/13154 A (ELK CORP OF DALLAS) 18 March 1999 (1999-03-18)

Concerning independent claim 1:

Novelty:

Document D1, which is considered the prior art closest to the subject matter of claim 1, describes a method for making a web including glass and cellulose fibres, with the following consecutive steps:

- suspending the glass fibres in process water containing a dispersant and a viscosity modifier,
- mixing the two suspensions (cellulose and glass fibres),

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Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- forming a fiber mat on a forming fabric,
- adding a binder to the wet fiber mat,
- drying the fiber mat and cross-linking the binder during the drying step.

Document D2 describes a method for making a web including glass and cellulose fibres, wherein said fibres are dispersed in process water, to which a viscosity modifier and a dispersant are added. The web is thereafter formed on a fabric, dried and cross-linked following the addition of a binder.

Consequently, the subject matter of claim 1 differs from D1 in that:

The glass and cellulose fibres are simultaneously suspended in the same cationic process water.

The subject matter of claim 1 differs from D2 in that:

the glass and cellulose fibres are suspended in cationic process water.

Therefore, the subject matter of claim 1 is novel (PCT Article 33(2)).

Inventive step:

The problem: simplifying the method of making a web

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Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

including glass and cellulose fibres.

The solution: simultaneously mixing the glass and cellulose fibres in the same cationic process water, and thereafter forming a web on a fabric, followed by the steps of drying the web and cross-linking the binder.

The solution to the problem, as proposed in claim 1 of the present application, is considered to involve an inventive step (PCT Article 33(3)) for the following reasons: neither the content of D1 nor the content of D2 suggests simultaneously mixing the glass and cellulose fibres in the same cationic process water prior to forming the web.

Claims 2-17 are dependent on claim 1 and therefore also meet, as such, the PCT requirements of novelty and inventive step.

Concerning claim 18:

Novelty:

Document D2, which is considered the prior art closest to the subject matter of claim 1, describes a web with a fibre composition of 80 to 99% of glass fibres and 1 to 20% of cellulose fibres and containing, by weight, 5 to 15% of a binder, relative to the fibre weight. No value is provided for the tear resistance thereof.

The subject matter of claim 18 differs from D2 in that the tear resistance thereof is higher than 430 gf, as

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citations and explanations supporting such statement

measured by the ISO 1974 standard.

Therefore, the subject matter of claim 18 is novel (PCT Article 33(2)).

Inventive step:

The problem: that of providing a high tear resistance glass and cellulose fibre web.

The solution: said web includes:

2 to 12% of cellulose,

70 to 80% of glass,

8 to 27% of binder,

and the tear resistance thereof is higher than 430 gf, as measured by the ISO 1974 standard.

The solution to said problem, as proposed in claim 18 of the present application, is considered to involve an inventive step (PCT Article 33(3)) for the following reasons: neither the content of D1 nor the content of D2 suggests the above percentages or the resulting tear resistance.

Claims 19 and 20 are dependent on claim 18 and therefore also meet, as such, the PCT requirements of novelty and inventive step.